

Notice of Allowability

Application No.

09/900,576

Examiner

Therese Barber

Applicant(s)

RICK ET AL.

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5 September 2003.
2. ☒ The allowed claim(s) is/are 1,10,13,14,17-38 and 41-101.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☒ CORRECTED DRAWINGS must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☒ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. <u>11</u> |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____ | 6 <input type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. The application has been amended as follows:

IN THE CLAIMS:

In claim 70, line 12, insert -- "phase of" -- before the phrase "heightened attenuation".

In claim 92, line 9, insert -- "phase of" -- before the phrase "heightened attenuation".

In claim 93, line 12, delete -- "has beam" -- after the term "crossed" and insert -- "beam has" -- before the term "crossed".

Drawings

3. The drawings filed on 6 July 2001 are acceptable subject to correction of the informalities indicated on the "Notice of Draftsperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

A photocopy of PTO-948, dated 19 May 2003, has been attached to this office action.

Response to Amendment

4. It is noted that an office action addressing claims 1, 10, 13, 14, 17-38 and 41-101 was mailed to the applicants on 21 August 2003. In addition, a copy of the interview summary dated 5 September 2003, regarding claims 94-101 was faxed to the attorney of record.

Allowable Subject Matter

5. Claims 1, 10, 13-14, 17-38, and 41-101 are allowed.

6. Regarding claims 1, 10, 13, 14, 17-34, 35-38, 42-45, 46-59, 94 and 95, the examiner agrees with the applicants' arguments on pages 16-24 of the amendment, dated 5 September 2003, regarding the objections to these claims and that the specific language of "at least one second image is taken after injection of the contrast medium during a phase of heightened attenuation due to the contrast medium" is not taught or reasonably suggest in the Horiba reference. Therefore, the claims are allowable over the prior art of record for at least the reason that although the prior art discloses an apparatus and the steps for the radiological examination of an organ utilizing a contrast medium, the prior art fails to teach or to reasonably suggest the imaging of the contrast medium in the organ during a phase of heightened attenuation after obtaining images of the organ before the injection of the contrast medium, thereby, forming a representative image of the contrast in the organ, as set forth in the claimed combination.

7. Regarding claims 41, 60-69, 96, and 97, the examiner agrees with the applicants' arguments on pages 18-20 and 22-25 of the amendment, dated 5 September 2003, regarding the objections to these claims and that the specific language of "taking at least one second image of

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the organ after the injection of the contrast medium, wherein the second image is taken during or after or at the end of the phase of heightened attenuation due to the contrast medium when the beam has crossed the organ” is not taught or reasonably suggest in the Horiba reference.

Therefore, the claims are allowable over the prior art of record for at least the reason that although the prior art discloses steps for radiological examination of an organ utilizing a contrast medium, the prior art fails to teach or to reasonably suggest the imaging of the contrast medium in the organ during a phase of heightened attenuation after obtaining images of the organ before the injection of the contrast medium, thereby, calculating a curve of attenuation or a representative image of the contrast in the organ, as set forth in the claimed combination.

8. Regarding claims 70-80 and 98, the examiner agrees with the applicants’ arguments on pages 18-20 and 27-30 of the amendment, dated 5 September 2003, regarding the objections to these claims and that the specific language of “at least one second image taken after injection of the contrast medium during a phase of heightened attenuation due to the contrast medium” representative of the incident energy beam” is not taught or reasonably suggest in the Horiba reference. Therefore, the claims are allowable over the prior art of record for at least the reason that the prior art fails to teach or to reasonably suggest a computer useable medium having computer program code means for taking for radiological examination of an organ utilizing a contrast medium wherein the imaging of the contrast medium in the organ during a phase of heightened attenuation after obtaining images of the organ before the injection of the contrast medium, thereby, forming a representative image of the contrast in the organ, as set forth in the claimed combination.

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9. Regarding claims 81-91 and 99, the examiner agrees with the applicants' arguments on pages 18-20 and 27-30 of the amendment, dated 5 September 2003, regarding the objections to these claims and that the specific language of "taking at least one second image of the organ after the injection of the contrast medium, wherein the second image is taken during or after or at the end of the phase of heightened attenuation due to the contrast medium when the beam has crossed the object" is not taught or reasonably suggest in the Horiba reference. Therefore, the claims are allowable over the prior art of record for at least the reason that the prior art fails to teach or to reasonably suggest a program storage device readable by a machine embodying a program of instruction to perform the steps of radiological imaging wherein at least one second image of the object after the injection of the contrast medium is taken, wherein the second image is taken during or after or at the end of a phase of heightened attenuation due to the contrast medium when the beam has crossed the object, thereby, calculating a curve of attenuation or a representative image of the contrast in the object, as set forth in the claimed combination.

10. Regarding claims 92 and 100, the examiner agrees with the applicants' arguments on pages 27-30 of the amendment, dated 5 September 2003, regarding the specific language of "to take at least one second image after the injection of the contrast medium during a phase of heightened attenuation due to the contrast medium" is not taught or reasonably suggest in the Horiba reference. Therefore, the claims are allowable over the prior art of record for at least the reason that the prior art fails to teach or to reasonably suggest a computer program product for use with an image display device having computer program code means whereby at least one second image is taken after the injection of the contrast medium in an object during a phase of

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heightened attenuation due to the contrast medium, thereby, calculating a representative image of the contrast in the object, as set forth in the claimed combination.

11. Regarding claims 93 and 101, the examiner agrees with the applicants' arguments on pages 27-30 of the amendment, dated 5 September 2003, regarding the specific language of "the taking of at least one second image of the object after the injection of the contrast medium, wherein the second image is taken during or after or at the end of a phase of heightened attenuation due to the contrast medium when the beam has crossed the object" is not taught or reasonably suggest in the Horiba reference. Therefore, the claims are allowable over the prior art of record for at least the reason that the prior art fails to teach or to reasonably suggest a computer program product for use with a display device having computer readable program code means whereby at least one second image of the object after the injection of the contrast medium is taken, wherein the second image is taken during or after or at the end of a phase of heightened attenuation due to the contrast medium when the beam has crossed the object, thereby, calculating a representative image of the contrast in the object, as set forth in the claimed combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

12. The applicants have cancelled claims 2-9, 11-12, 15-16 and 39-40.
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Klotz (USPN 6,647,283 B2) discloses a method for examining a living subject by obtaining the time curve of the concentration of a contrast agent having a physical property identifiable with the imaging method of a region of interest of the subject.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Therese Barber whose telephone number is (703) 306-0205. The examiner can normally be reached on Monday to Friday from 8:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (703) 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

tb 
30 November 2003


DAVID V. BRUCE
PRIMARY EXAMINER